District 10 Mobility Performance Report

2016 First Quarter

DEPARTMENT OF TRANSPORTATION

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District 10 Mobility Performance Report

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EXECUTIVE SUMMARY

Overview

Caltrans District 10 contains eight counties located within the Central Valley (San Joaquin / Stanislaus / Merced) and the Sierra Nevada (Amador / Calaveras / Tuolumne / Mariposa / Alpine). Over the years detection in Alpine and Calaveras Counties has been sparse, so the District 10 Mobility Performance Report (MPR) no longer includes these two counties in the quarterly or annual analysis.

The MPR quarterly analysis compares information in the current quarter to that of the previous quarter and the quarter one year prior. The following are the performance measures reported in the MPR:

- Vehicle Miles Traveled (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (LLM)
- Detector Health (DH)

This information is based on data collected every day of the quarter, twenty–four hours a day, by automated vehicle detector stations deployed on urban-area freeways where congestion is regularly experienced. The MPR presents congestion information at two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph), and delay from vehicles traveling below 60 mph. The delay at the 35 mph threshold represents severe congestion while delay at

60 mph represents all congestion, both light and heavy. These thresholds are set by Caltrans and are based upon engineering experience and District input.

FINDINGS

In the first quarter, total delay equaled 85 thousand Vehicle Hours of Delay (VHD) at the 35 mph speed threshold (25.2% increase over one year ago; 5.1% increase over last quarter), and 383 thousand VHD at the 60 mph threshold (20.41% increase over one year ago; 5.1% increase over last quarter). The average weekday delay experienced in this quarter was approximately 1,299 VHD at 35 mph (22.1% increase over one year ago; 6.8% increase over last quarter), and 5,601 VHD at 60 mph (18.0% increase over one year ago; 6.4% increase over last quarter). The increases in VHD can be attributed to current construction projects and to the fact that this quarter received more rain / inclement weather when compared to last year and last quarter

Top Ten Bottlenecks for 2016 Quarter 1

FWY	COUNTY	LOCATION	SHIFT	ABS. PM	CA PM	# DAYS ACTVE	AVG. EXTENT (MILES)	TOTAL DELAY (VEH-HRS)	TOTAL DURATION (MINS)
I205-W	SJ	E OF HANSEN RD	AM	3.310	2.380	40	4.9	35589	3785
I580-E	SJ	E of PG&E Power Line	PM	12.306	11.710	10	5.0	10379	2180
SR99-S	STA	Maze Blvd	PM	227.325	16.290	30	3.3	7988	2115
SR99-S	SJ	Austin Rd	PM	240.818	5.033	10	1.1	1928	1010
I5-N	SJ	N/O French Camp Rd	PM	468.140	R22.648	40	0.2	1303	4180
SR99-S	STA	Hammett Rd	PM	235.307	24.272	13	2.6	1106	375
SR99-S	SJ	S/O Rte 120	PM	241.202	5.417	26	0.4	500	1465
I5-N	SJ	Hammer Lane UC	PM	478.188	32.696	13	2.4	418	360
SR99-S	MER	N/O Off Ramp to Winton Pkwy	PM	203.953	R30.632	15	0.7	238	760
SR99-S	MER	N/O Off Ramp to Winton Pkwy	AM	203.953	R30.632	13	0.6	152	1120

The following District 10 projects are currently being constructed or are scheduled for construction effective April 2016. These current and future (planned) projects will relieve congestion in District 10:

MERCED COUNTY

MER 99 PLAINSBURG ROAD FREEWAY; EA 10-41580
Convert from 4 lane expressway to 6 lane freeway on an 8 lane right of way
Approve Construction Contract Date – 07/27/2012
End Project – 12/30/2016

MER 99 MISSION AVENUE INTERCHANGE / FREEWAY; EA 10-36311
Convert from 4 lane expressway to 6 lane freeway on an 8 lane right of way
Approve Construction Contract Date – 04/07/2008
End Project – 06/15/2016

MER 99 ATWATER FREEWAY; EA 10-41481
Convert from 4 lane expressway to 6 lane freeway on an 8 lane right of way
Approve Construction Contract Date – 11/28/2005
End Project – 06/30/2017

MER 99 LIVINGSTON FREEWAY STAGE 2; EA 10-3169E
Convert from 4 lane expressway to 6 lane freeway on an 8 lane right of way
Approve Construction Contract Date – 03/28/2008
End Project – 06/30/2017

MER 99 NB LIVINGSTON MEDIAN WIDENING; EA 10-0Q121
Lane widening from 2 to 3 lanes
Approve Construction Contract Date – 08/01/2021
End Project – 10/02/2023

MER 99 SB LIVINGSTON MEDIAN WIDENING; EA 10-0Q122
Lane widening from 2 to 3 lanes
Approve Construction Contract Date – 01/19/2019
End Project – 10/01/2021

MER 152 – LOS BANOS BYPASS SEGMENT I; EA 10-41911
Convert 4 lane expressway to 6 lane freeway
Approve Construction Contract Date – 05/15/2018
End Project – 10/01/2020

SAN JOAQUIN COUNTY

SJ 4 RAMP METERING IMPROVEMENTS; EA 10-1F180
Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PRS/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2020

I-5 NORTH STOCKTON WIDENING AND HOV LANES; EA 10-0G470
Widen bridges and freeway lanes, HOV lane
Approve Construction Contract Date – 6/15/2011
End Project – 8/29/2016

SJ 99 – MANTECA WIDENING MAINLINE PHASE 1; EA 10-0E611
Widen existing freeway with HMA
Approve Construction Contract Date – 4/19/2012
End Project – 7/16/2016

SJ 99 – SOUTH STOCKTON WIDENING; EA 10-3A100
Widen existing freeway from 4 to 6 lanes
Approve Construction Contract Date – 12/3/2012
End Project – 12/5/2017

SJ 120 RAMP METERING IMPROVEMENTS; EA 10-1F040
Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PRS/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2020

STANISLAUS COUNTY

STA 99 – PELANDALE INTERCHANGE; EA 10-47210
Modify Existing Interchange
Approve Construction Contract Date – 4/15/2014
End Project – 12/1/2018

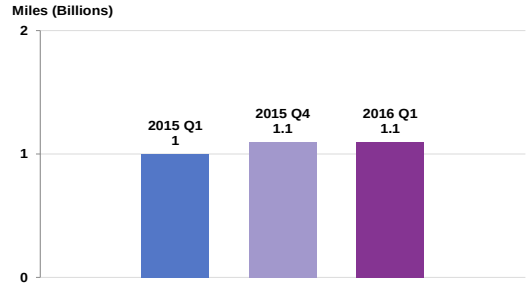
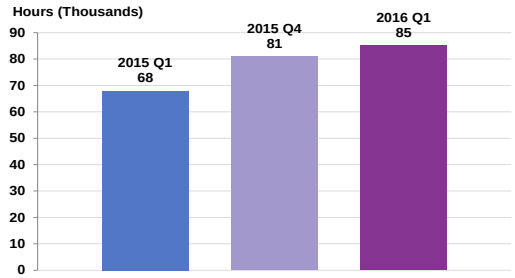
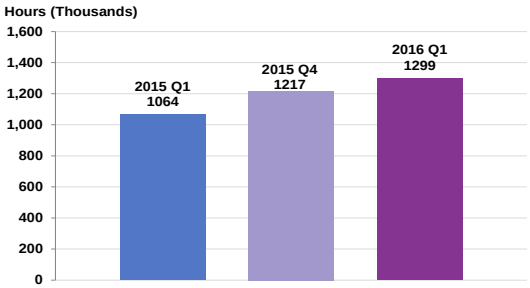
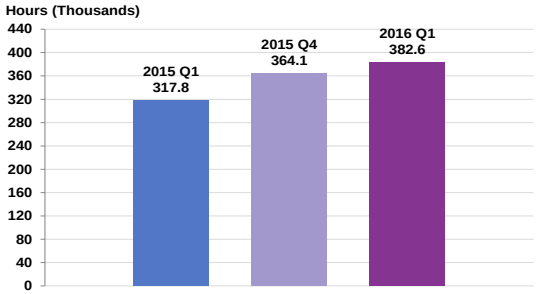
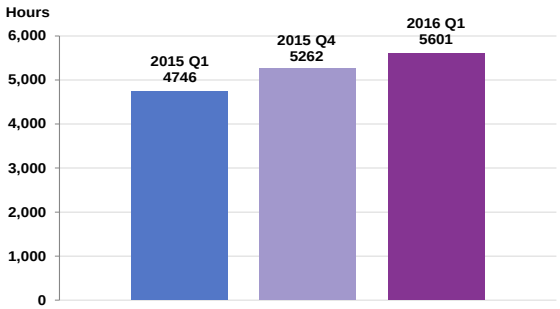
STA 99 – KIERNAN INTERCHANGE; EA 10-0L330
Reconstruct Interchange
Approve Construction Contract Date – 2/1/2013
End Project – 11/30/2017

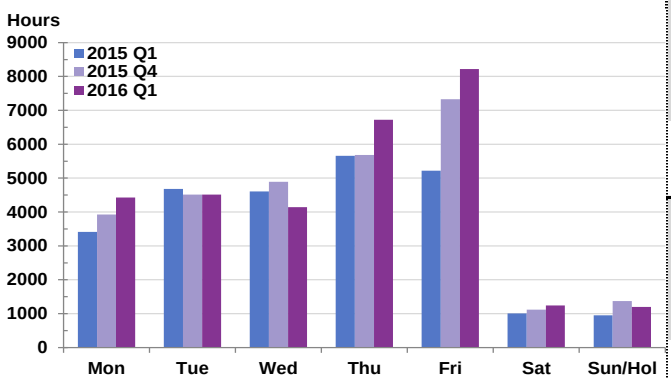
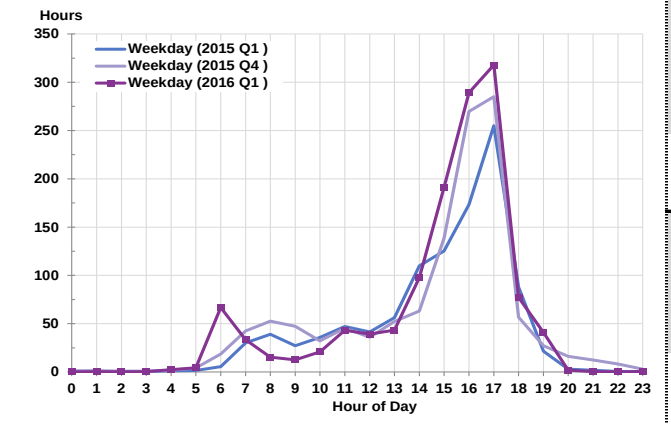
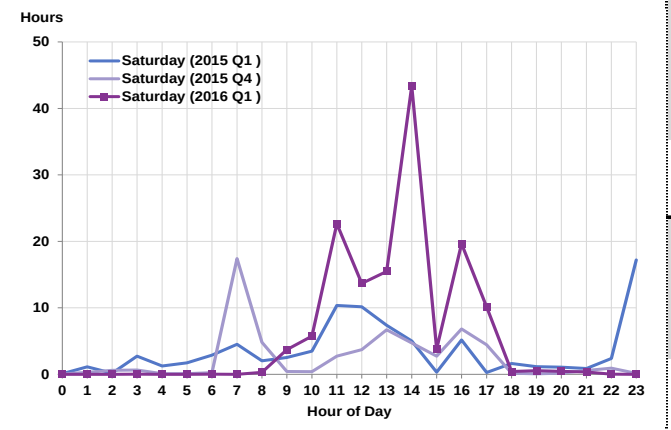
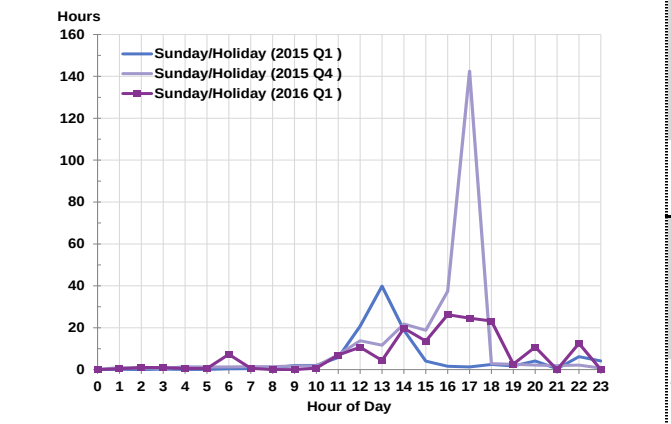
STA 99 / SJ 99 RAMP METERING & MAINLINE IMPROVEMENTS; EA 10-1C300
Improve Mainline and Ramp Operations; Standardize Structure Clearance; Add Auxiliary Lane
Currently in PSR/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2020

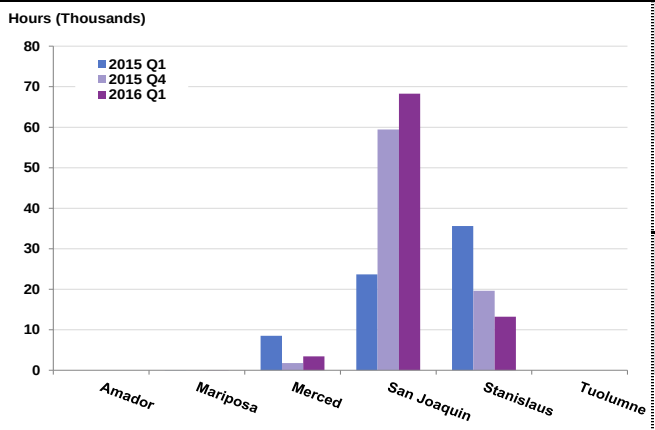
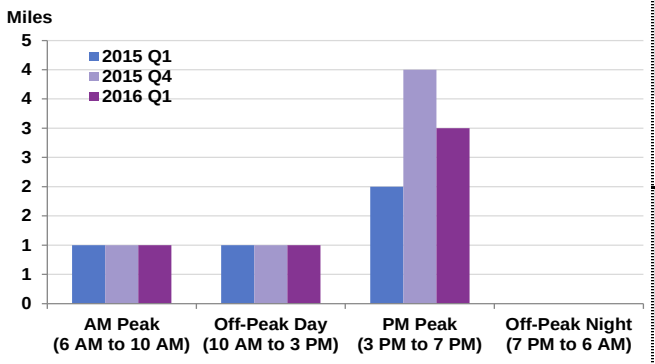
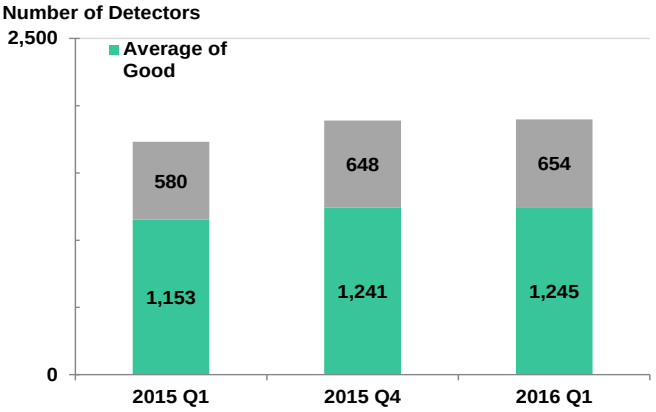
The above capacity increasing, ramp metering, interchange improvement, and interchange construction projects are located on the routes, in the cities, and in the counties that experience the most congestion in District 10. It is expected that the projects will help increase the Vehicle Miles Traveled while reducing congestion and delay as the population and demand in District 10 grows over the next 10 years.

The next section of this report summarizes the District 10 2016 Q1 Quarterly Mobility Statistics.

2016 Q1 Quarterly Mobility Statistics – District 10

Measure	Graph	Percentage Change	
		Over one year ago	Over last quarter
Vehicle Miles of Travel (VMT)		**8.3%**	**-0.3%**
Total Vehicle Hours of Delay (VHD) at 35 mph		**25.2%**	**5.1%**
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		**22.1%**	**6.8%**
Total Vehicle Hours of Delay (VHD) at 60 mph		**20.4%**	**5.1%**
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		**18%**	**6.4%**

Measure	Graph	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter	Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
Average Vehicle Hours of Delay by Day of Week at 60 mph		Wednesday -10.1%	Wednesday -15.3%	Friday 57.4%	Thursday 18.3%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		8 AM -60.6%	8 AM -70.8%	4 PM 66.8%	3 PM 38%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		11 PM -100%	7 AM -100%	2 PM 764.6%	2 PM 821.1%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays		1 PM -89%	5 PM -82.8%	4 PM 1552%	6 PM 711.3%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago Stanislaus -62.8%	Largest Magnitude Decrease over last quarter Stanislaus -32.6%
		Largest Magnitude Increase over one year ago San Joaquin 188.3%	Largest Magnitude Increase over last quarter San Joaquin 14.9%
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago Off-Peak Day -24.8%	Largest Magnitude Decrease over last quarter PM Peak -23.1%
		Largest Magnitude Increase over one year ago PM Peak 44.5%	Largest Magnitude Increase over last quarter Off-Peak Day 9.1%
Average Number of Good and Bad Detectors		Change in Good over one year ago 8%	Change in Good over last quarter 0%
		Change in Bad over one year ago 13%	Change in Bad over last quarter 1%

Congestion by Route											
		Vehicle Hours of Delay at 35 mph			Difference 2016 Q1-2015 Q1		Difference 2016 Q1-2015 Q4		Rank		
Route	County	2015 Q1	2015 Q4	2016 Q1	Absolute	Percentage	Absolute	Percentage	2015 Q1	2015 Q4	2016 Q1
I580	San Joaquin	1,212	23,085	75,654	74,443	6144.2%	52,569	227.7%	8	3	1
I205	San Joaquin	52,912	167,256	65,911	12,998	24.6%	-101,345	-60.6%	1	1	2
SR99	San Joaquin	5,897	42,903	20,973	15,075	255.6%	-21,931	-51.1%	5	2	3
SR4	San Joaquin	15,792	10,738	11,054	-4,739	-30.0%	316	2.9%	3	5	4
SR99	Stanislaus	34,939	16,618	8,914	-26,025	-74.5%	-7,704	-46.4%	2	4	5
I5	Stanislaus	675	3,033	4,334	3,659	542.5%	1,301	42.9%	9	7	6
SR99	Merced	7,107	1,668	2,960	-4,147	-58.4%	1,291	77.4%	4	8	7
I5	San Joaquin	1,992	3,587	1,866	-126	-6.3%	-1,720	-48.0%	6	6	8
SR152	Merced	1,429	113	460	-969	-67.8%	347	308.1%	7	9	9
SR49	Mariposa	78	81	57	-21	-27.2%	-24	-30.0%	10	10	10
I5	Merced	0	3	43	43		41	1632.0%		11	11
SR104	Amador	0	0	0	0		0				
SR108	Tuolumne	0	0	0	0		0				
SR12	San Joaquin	0	0	0	0		0				
SR120	San Joaquin	0	0	0	0		0				
SR120	Tuolumne	0	0	0	0		0				
SR132	San Joaquin	3	1	0	-3	-100.0%	-1	-100.0%	11	12	
SR219	Stanislaus	0	0	0	0		0				
TOTALS		**122,035**	**269,085**	**192,225**	**70,189**	**57.5%**	**-76,860**	**-28.6%**			

I5 Merced: No delay detected in 2015 Q1.
SR104 Amador: No delay detected in 2015 Q1, 2015 Q4, and 2016 Q1
SR 108 Tuolumne: No delay detected in 2015 Q1, 2015 Q4, and 2016 Q1
SR 12 San Joaquin: No delay detected in 2015 Q1, 2015 Q4, and 2016 Q1
SR 120 San Joaquin No delay detected in 2015 Q1, 2015 Q4, and 2016 Q1
SR 120 Tuolumne: No delay detected in 2015 Q1, 2015 Q4, and 2016 Q1
SR 132 Stanislaus: No delay detected in 2016 Q1
SR 219 Stanislaus: No delay detected in 2014 2015 Q1, 2015 Q4, and 2016 Q1